

Mycetocharina (Alleculopsis) bahukalatensis sp. nov.
(Coleoptera: Tenebrionidae: Alleculinae) from Iran

Vladimír NOVÁK

District Museum Prague – East, Masarykovo náměstí 97, CZ-250 01 Brandýs nad Labem,
Czech Republic; e-mail: novak@ompv.cz

Abstract. *Mycetocharina (Alleculopsis) bahukalatensis* sp. nov. from Iran is described and illustrated, and a key to the species of the subgenus *Alleculopsis* Semenov, 1893, is added.

Key words. Coleoptera, Tenebrionidae, Alleculinae, *Mycetocharina*, *Alleculopsis*, taxonomy, new species, key, Iran

Introduction

SEIDLITZ (1891) described the genus *Mycetocharina* Seidlitz, 1891, and SEMENOV (1893) established its subgenus *Alleculopsis* Semenov, 1893. Males of this subgenus differ from those of *Mycetocharina* s. str. mainly by the eyes touching on the frons. BORCHMANN (1910), MADER (1928), and NOVÁK & PETERSSON (2008) listed only four species of the subgenus *Alleculopsis*: *M. (A.) deserticola* Semenov, 1893, known from Kazakhstan, Turkmenistan, and Uzbekistan; *M. (A.) macrophthalma* (Gebler, 1859), from Kazakhstan, Kyrgyzstan, Mongolia, and Turkmenistan; *M. (A.) puncticollis* Reitter, 1898, from Uzbekistan; and *M. (A.) ruficeps* Pic, 1923, from Yemen. An additional species, *M. (A.) bahukalatensis* sp. nov. from Iran (Baluchistan), is described and illustrated here. A key to all species of the subgenus *Alleculopsis* based on MUCHE's (1982) key is added.

Material and methods

The type specimens of the new species were collected during the second Czechoslovak-Iranian expedition of National Museum in Prague to Iran in 1973 (for the list of localities see HOBERLANDT 1981). Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the 'ocular index' (CAMPBELL & MARSHALL 1964) and 'pronotal index' (CAMPBELL 1965), are used in this paper as well. The ocular index equals $(100 \times \text{minimum dorsal distance between eyes}) / (\text{maximum dorsal width across eyes})$. The pronotal index is calculated as $(100 \times \text{length of pronotum along midline}) / (\text{width across basal angles of pronotum})$.

The following codens are used:

HNHM Hungarian Natural History Museum, Budapest, Hungary;

NMPC National Museum, Praha, Czech Republic;

VNPC Vladimír Novák private collection, Praha, Czech Republic.

Moreover, a double slash (//) separates data on different labels and a slash (/) data in different rows.

The new species was compared with the following type material from Reitter's collection, deposited in HNHM:

Mycetocharina (A.) deserticola. PARATYPUS [in fact a syntype]: ♂, white label with red margins: 'Paratypus' [printed in red] and 'Mycetocharina / Alleculopsis / deserticola Semenov 1893' [handwritten] // white label: 'coll. Reitter' [printed in black].

Mycetocharina (A.) puncticollis. HOLOTYPE [in fact a syntype]: ♂, white label with red margins: 'Holotypus' [printed in red] and 'Mycetocharina puncticollis Reitter 1898' [handwritten] // white label: 'coll. Reitter' [printed in black] // white label: 'Turkestan Buchara' [handwritten in black].

Taxonomy

Key to the males of *Mycetocharina (Alleculopsis)* species

- 1 (2) Eyes of males touching on frons. Subgenus *Alleculopsis* Semenov, 1893 3
- 2 (1) Eyes of males not touching on frons. Subgenus *Mycetocharina* Seidlitz, 1891
- 3 (4) Base of pronotum rounded, posterior angles obtusely angled. Kazakhstan, Kyrgyzstan, Mongolia, and Turkmenistan. *M. (A.) macrophthalma* (Gebler, 1859)
- 4 (3) Base of pronotum weakly bisinuate, posterior angles almost rectangular. 5
- 5 (6) Body narrow, more elongate, yellow to yellowish brown, pronotum narrower (Fig. 7). 7
- 6 (5) Body broader, broadest near two-thirds of length of elytra, pronotum broader, more transverse (Fig. 2). 9
- 7 (8) Body yellow ochre, antennomeres 4-6 three times as long as their apical width, pronotum shiny with shallow, sparser punctures. Kazakhstan, Turkmenistan, and Uzbekistan. *M. (A.) deserticola* Semenov, 1893
- 8 (7) Body colour a richer reddish-yellow, antennomeres 4-6 only twice as long as apical width; pronotum with dense and coarse punctures. Uzbekistan. *M. (A.) puncticollis* Reitter, 1898
- 9 (10) Pronotum narrowing anteriorly; punctuation of elytra fine and sparse; basal part of head reddish. Yemen. *M. (A.) ruficeps* Pic, 1923
- 10 (9) Sides of pronotum in posterior half straight, parallel-sided, sides of anterior half rounded; punctuation of elytra dense, deep and coarse; basal part of head brown. Iran (Baluchistan). *M. (A.) bahukalatensis* sp. nov.

Mycetocharina (Alleculopsis) bahukalatensis sp. nov.

(Figs. 1-6)

Type locality. Iran, Baluchistan, environs of Bahu-Kalat (68 km S of Rask, 25°44'N 61°32'E).

Type material. HOLOTYPE: ♂, 'Loc. no. 147, SE Iran, Bahu-Kalat, 3.-4.iv.1973, Exp. Nat. Mus. Praha' (NMPC). PARATYPES: 14 ♂♂ 11 ♀♀, same data as holotype (NMPC, VNPC); 1 ♂, 'Loc. no. 203, S Iran, Minab [27°09'N 57°05'E], 19.-20.v.1973' (NMPC). The types are provided with a printed red label: '*Mycetocharina (Alleculopsis) bahukalatensis* sp. n. HOLOTYPE [or PARATYPE] V. Novák det. 2007'.

Description. Habitus of male holotype as in Fig. 1. Body length 5.38-7.36 mm, width 1.74-2.36 mm.

Male (holotype). Head (Fig. 2) larger, sienna brown, with dense light setation, basal part darker with dark setation at sides. Eyes large, dark, transverse, emarginate, without distinct interspace between eyes, touching one another. Head widest across eyes 1.00 mm, approximately 0.77 times as wide as pronotal base. Length of head (visible part) 1.13 mm. Clypeus and anterior part of head slightly shiny, setation longer. Basal part of head dull, with dense, middle-sized, shallow punctures, interspaces between punctures very narrow, shiny; anterior part with sparser, small-sized, shallow punctures, interspaces broader, shiny, setation distinctly longer. Clypeus shiny, conspicuously rugose.

Antenna (Fig. 4). Relatively long (2.95 mm, i.e. reaching 0.54 of body length), dull, all antennomeres light brown, concolorous with elytron, with relatively shorter and denser light setation. Antennomeres slightly rugose, relatively narrow, antennomere 2 shortest, antennomeres 3-10 conspicuously widened at apex, slightly serrate; antennomeres 3-11 with relatively shallow, dense and light punctures, dull; antennomeres 1 and 2 slightly shiny. Ratios of relative lengths of antennomeres 1-11 equal to 0.50 : 0.34 : 1.00 : 1.00 : 1.02 : 0.98 : 1.00 : 1.09 : 1.13 : 1.10 : 1.15. Length/maximum width ratios of antennomeres 1-11 equal to 1.09 : 0.97 : 2.17 : 2.08 : 2.54 : 1.99 : 1.93 : 2.36 : 2.50 : 2.95 : 3.44.

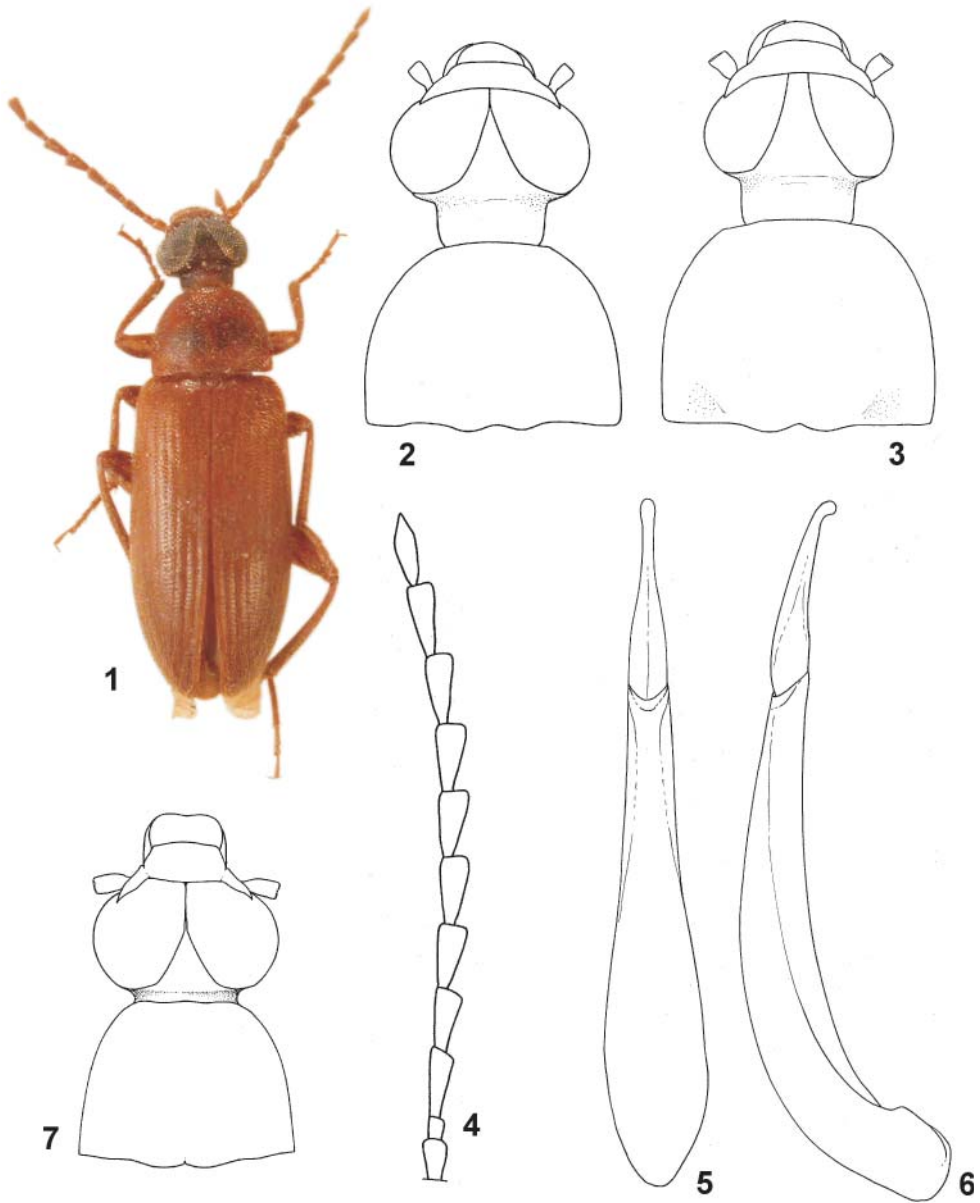
Maxillary palpus pale brown, concolorous with apical part of head and antennae, with shorter light setation, penultimate palpomere with a few longer setae at apex. Second palpomere longest, distinctly broader at apex, penultimate palpomere shortest, ultimate palpomere broadly triangular, both distinctly broader at apex. Ratios of relative lengths of palpomeres 2-4 equal to 1.37 : 1.00 : 2.05. Length/maximum width ratios of palpomeres 2-4 equal to 2.17 : 1.36 : 0.94.

Pronotum (Fig. 3) sienna brown, slightly shiny with light setation, distinctly narrower than elytron at base; 1.30 times as wide as head with eyes together, longest in the middle 1.01 mm and widest at base 1.30 mm. Pronotal index equal to 77.46. Border almost complete, only in the middle of anterior part indistinct; posterior margin bisinuate. Posterior angles roundedly rectangular, lateral margins straight in posterior half and rounded anteriorly. Anterior angles not conspicuous. Surface densely and shallowly punctate, punctures large, interspaces very narrow, shiny. Punctures inside with slight granulation, interspaces rugose, pronotum slightly shiny.

Elytra unicolorous sienna brown with light, dense, and relatively short setation, 3.37 mm long and 1.74 mm wide, slightly broader than pronotum, widest approximately at two thirds from base. Length/maximum width ratio equal to 1.94. Surface punctate, punctures in elytral striae conspicuous, separated by less one diameter. Elytral intervals with small punctures and microgranulation, slightly shiny. Elytral epipleura well developed, pale brown, evenly narrowing in basal half, in apical half before abdominal sternite 5 parallel, then narrowing to rounded apex.

Scutellum sienna brown, concolorous with elytra.

Legs unicolorous sienna brown, with dense light setation. Femora thicker than tibia. Tibia very narrow, slightly dilated at apex. Tarsomeres of all tarsi narrow. Penultimate tarsomere of each tarsus with membranous lobes. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00 : 0.62 : 0.52 : 0.61 : 0.91 (protarsus), 1.00 : 0.45 : 0.30 : 0.34 : 0.86 (mesotarsus), and 1.00 : 0.40 : 0.18 : 0.56 (metatarsus). Both anterior tarsal claws with 10 visible teeth.



Figs. 1-7. 1-6 – *Mycetocharina bahukalatensis* sp. nov.: 1 – habitus of male (holotype); 2 – head and pronotum of male (holotype); 3 – head and pronotum of female; 4 – antennae of male; 5 – aedeagus from dorsal view; 6 – aedeagus from lateral view. 7 – *Mycetocharina deserticola* Semenov, 1893: head and pronotum of male.

Ventral side of body siena brown, concolorous with dorsal side. Abdomen with relatively sparse shorter light setation, slightly shiny, with microgranulation.

Aedeagus (Figs. 5-6). Pale yellowish brown, distinctly shiny. Basal piece 2.52 times as long as apical piece, rounded at basal half, then with lateral sides nearly straight in apical half. Basal half of basal piece approximately twice as wide as its apex in dorsal view. Apical piece narrowing to rounded apex in dorsal view, apex droplet-shaped in lateral view.

Female. Body larger, more oval, pronotum broader, antennae shorter, reaching only 0.43 of body length. Space between eyes distinct but very narrow, ocular index approximately 13.51. Head and pronotum as in Fig. 3. Both anterior tarsal claws with 7 visible teeth.

Ratios of relative lengths of antennomeres 1-11 equal to 0.46 : 0.37 : 1.00 : 1.04 : 0.96 : 0.96 : 1.00 : 0.97 : 1.09 : 1.10 : 1.20. Length/maximum width ratios of antennomeres 1-11 equal to 1.00 : 1.18 : 2.92 : 2.82 : 2.79 : 2.79 : 2.50 : 2.19 : 2.30 : 2.41 : 3.00. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00 : 0.63 : 0.59 : 0.63 : 1.57 (protarsus), 1.00 : 0.49 : 0.30 : 0.21 : 0.56 (mesotarsus), and 1.00 : 0.44 : 0.21 : 0.56 (metatarsus).

Variability. The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males (n = 16). Length 5.75 mm (5.38-6.57 mm); head length 1.17 mm (1.09-1.26 mm); head width 1.06 mm (0.98-1.16 mm). Pronotal length (along midline) 1.03 mm (0.94-1.22 mm); pronotal width at base 1.40 mm (1.29-1.67 mm). Pronotal index 73.58 (68.24-80.00). Elytral length 3.58 mm (3.33-4.09 mm); elytral width 1.88 mm (1.76-2.14 mm).

Females (n = 11). Length 6.51 mm (5.85-7.36 mm); head length 1.19 mm (0.98-1.35 mm); head width 1.05 mm (0.96-1.16 mm). Ocular index 13.51 (10.09-16.09). Pronotal length (along midline) 1.16 mm (0.98-1.35 mm); pronotal width at base 1.54 mm (1.40-1.70 mm). Pronotal index 75.55 (69.91-81.97). Elytral length 4.23 mm (3.82-4.82 mm); elytral width 2.13 mm (1.95-2.36 mm).

Differential diagnosis. *Mycetocharina (Alleculopsis) bahukalatensis* sp. nov. differs from the related *M. (A.) deserticola* and *M. (A.) puncticollis* mainly by the broader and more transverse pronotum, broader body, and colour, which is siena brown in *M. (A.) bahukalatensis* sp. nov. Moreover, *M. (A.) deserticola* and *M. (A.) puncticollis* possess a narrower pronotum and more elongate body with parallel-sided elytra, and are yellow ochre or reddish yellow in colour. *Mycetocharina (A.) bahukalatensis* sp. nov. differs from *M. (A.) ruficeps* mainly by the shape of the pronotum and dense, deep and coarse punctuation of elytra, while *M. (A.) ruficeps* has a fine and sparse punctuation of elytra. For further details see the key above.

Etymology. Toponymic, named after the type locality Bahu-Kalat.

Distribution. Southern Iran, Baluchistan province.

Acknowledgements

Sincere thanks are due to Josef Jelínek (NMPC) for the loan of Iranian Alleculinae and to Ottó Merkl (HNHM) for the loan of type material under his care. Special thanks are due to Luboš Dembický (Brno, Czech Republic) for making digital photographs and Zuzana Čadová (Liberec, Czech Republic) for the excellent drawings.

References

- BORCHMANN F. 1910: Pars 3: Alleculidae. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum Catalogus*. W. Junk, Berlin, 80 pp.
- CAMPBELL J. M. 1965: A revision of the genus *Charisius* (Coleoptera: Alleculidae). *Coleopterist's Bulletin* **19**: 41-56.
- CAMPBELL J. M. & MARSHALL J. D. 1964: The ocular index and its applications to the taxonomy of the Alleculidae (Coleoptera). *Coleopterist's Bulletin* **18**: 42.
- HOBERLANDT L. 1981: Results of the Czechoslovak-Iranian entomological expedition to Iran. Introduction to the Second expedition 1973. *Acta Entomologica Musei Nationalis Pragae* **40**: 5-32.
- MADER L. 1928: Alleculidae. Columns 901-913. In: WINKLER A. (ed.) 1924-1932: *Catalogus coleopterorum regionis palaearcticae*. Winkler & Wagner, Wien, columns 881-1008.
- MUCHE W. H. 1982: Insects of Saudi Arabia. Coleoptera: Fam. Alleculidae. *Fauna of Saudi Arabia* **4**: 116-123.
- NOVÁK V. & PETERSSON R. 2008: Alleculinae. Pp. 319-339. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera*. Vol. 5. Apollo Books, Stenstrup, 670 pp.
- SEIDLITZ G. C. M. VON 1891: *Fauna Transsylvanica. Die Käfer (Coleoptera) Siebenbürgens*. Hartung, Königsberg, lvi + 192 + 914 pp + 1 pl.
- SEMENOV A. 1893: De Coleopterorum familia nova. *Mélanges Biologiques Tirés du Bulletin Physico-Mathématique de l'Académie Impériale des Sciences de St.-Petersbourg* **13**: 359-366.